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10/062,688	01/31/2002	Marc-David Cohen	343355600030	2177

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EXAMINER	
KRISCIUNAS, LINDA MARY	
ART UNIT	**PAPER NUMBER**
3623	

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/062,688	COHEN ET AL.	
	Examiner	Art Unit	
	Linda Krisciunas	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/25/05, 10/26/05,*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *IDS 1/12/06, 2/7/05*.

DETAILED ACTION

1. The following is a Non-Final Office Action in response to the application dated January 31, 2002. Claims 1-32 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4, 8-10, 14 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Siegrist et al (US 5,652,842).

As per claim 1, Siegrist teaches assessing performance-related data for a preselected set of performers, comprising: receiving data about performance measures of a first performer (column 1, lines 46-62: "the invention features a computer-based method of aiding comparison of competitive performance of a first provider of services with other providers of the services, where the services are provided to a mix of customers belonging to different classes and the performance in providing the services is different for customers belonging to different classes. Data representing the first provider's competitive performance in providing various services to its customers is stored. Also stored is mix data representing the mix of its customers to which the services are provided. Similar data is stored representing each of the other providers' competitive performance in providing various services to its customers. The data of the other providers is adjusted in accordance with the mix data of the first provider.

The unadjusted data of the first provider is visually provided together with the adjusted data of the other providers."); receiving business logic rules related to at least one of the performance measures (column 2, lines 16-19: "Rules are stored for selecting which of the pertinent data has greater significance in comparing the performances of the service providers. The rules are automatically applied to the pertinent data to select the information for the printed report."); constructing a mathematical optimization program that includes an overall performance rating as an objective function (column 4, lines 25-40: "The final report 22 not only presents a mathematical and graphical comparison according to the user's parameters 18, but it also constructs an English-language prose explanation of the results of the comparison. A report may contain one or more of several sections. These sections include analyses of the client hospital's market share, payor mix, patient demographics, admit source, case mix, length of stay, and cost per case. The report also searches for comparison results of particular interest to the client hospital. Internal rules 28 cause the system 5 to determine, for example, if the client hospital has significantly (more than 110%) higher costs than its competitors, or which single competitor is most superior in a particular report area. In addition, the report includes an "Opportunity Analysis/Action Plan" section which provides suggestions to help the client hospital improve its competitiveness."); and using the mathematical optimization program to optimize the overall performance rating of the first performer by adjusting a set of weights constrained by the business logic rules (See Table III, columns 25-26, where weights are applied to the fiscal year data.); wherein the overall performance rating is used to assess the performance of the first

performer (column 1, lines 47-48: "comparison of competitive performance of a first provider of services with other providers of the services").

As per claim 2, Siegrist teaches determining absolute weight relationships of the performance measures based upon the business logic rules (column 2, lines 22-26: "The rules may be based on which of the pertinent data represent the greatest difference in performance of the first provider of services compared to performance of the other providers, or on which of the pertinent data represent the greatest opportunities for improved performance."); and using the mathematical optimization program to optimize the overall performance rating of the first performer by adjusting the determined absolute weight ranges constrained by the business logic rules (column 1, lines 58-62: "The data of the other providers is adjusted in accordance with the mix data of the first provider. The unadjusted data of the first provider is visually provided together with the adjusted data of the other providers.").

As per claim 4, Siegrist teaches optimality in the overall performance rating for the first performer constrained by the business logic rules (column 1, lines 58-62: "The data of the other providers is adjusted in accordance with the mix data of the first provider. The unadjusted data of the first provider is visually provided together with the adjusted data of the other providers.").

As per claim 8, Siegrist teaches ranking the overall performance rating of the second performer relative to the overall performance rating of the performer (column 10, lines 24-28: "The relative rank of the client hospital's total cost per case in relation to the average total cost per case of the competing hospitals is then determined. This rank is

used to report information of special interest to the client hospital according to the internal rules 28 (FIG. 1), as described above.").

As per claim 9, Siegrist teaches the preselected set of performers includes suppliers that are to be assessed (column 2, lines 14-16: "From the raw data in the database, a set of pertinent data is generated appropriate to comparing the performances of the service providers." Whereby service provider is equivalent to supplier in that they perform an identical function in substantially the same manner with substantially the same results.).

As per claim 10, Siegrist teaches the preselected set of performers includes services that are to be assessed (column 2, lines 21-22: "The raw data may include data for services provided.").

As per claim 14, Siegrist teaches converting the business logic rules into constraints for use by the linear programming module in optimizing the overall performance rating of the first performer (column 2, lines 16-19: "Rules are stored for selecting which of the pertinent data has greater significance in comparing the performances of the service providers. The rules are automatically applied to the pertinent data to select the information for the printed report" where the rules would function as the constraints in the program), wherein the overall performance rating is used to assess the performance of the first performer (column 1, lines 47-48: "comparison of competitive performance of a first provider of services with other providers of the services").

As per claim 17, Siegrist teaches performance measures data interrelates a performer with at least two performance measurements (column 1, line 65: "The data may relate to length of stay, charges, or costs.").

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3, 5, 7, 15-16, 18-24, and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siegrist in view of Benjamin et al (US 2002/0107723).

As per claim 3, Siegrist teaches using the linear program model to optimize the overall performance rating of the first performer by adjusting the determined relative weight relationships constrained by the business logic rules (column 1, lines 58-62: "The data of the other providers is adjusted in accordance with the mix data of the first provider. The unadjusted data of the first provider is visually provided together with the adjusted data of the other providers."). Siegrist does not explicitly teach weight ranges. Benjamin teaches that it is known to determine relative weight ranges of the performance measures based upon the business logic rules and the absolute weight ranges (paragraph 60: "h=filter constant (i.e., weighting factor) which is fraction between 0 and 1. A small value weighs past performance stronger; a high (closer to 1) value weighs recent performance more strongly. A value of 0.2 is used in the example"). Benjamin is an analogous art as it also teaches about rating performance. Therefore it

would have been obvious to one of ordinary skill in the art at the time of the invention to modify the rating system of Siegrist with the weight ranges feature of Benjamin to provide a more user-friendly system which allows adaptability of the weighting.

As per claims 5 and 22, Siegrist teaches the objective function is solved such that the overall performance rating is maximum (paragraph 32: "the matrix generator 20 mathematically combines these two vectors generated in response to the received data to generate values for an ideal supplier-rating matrix."). Benjamin is an analogous art as it also teaches about rating performance. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the rating system of Siegrist with the maximum feature of Benjamin to provide a more user-friendly system.

As per claim 7, Siegrist does not explicitly teach a second performer. Benjamin teaches that it is known to receive performance measures data for a second performer (paragraph 10: "defining a weighting factor and generating a second supplier rating matrix for the supplier by mathematically combining the first supplier rating matrix, the weighting factor, the second job attribute vector and the second performance vector."); and using the mathematical optimization program to optimize the overall performance rating of the second performer by adjusting a set of weights constrained by the business logic rules, such that the set of weights of the second performer is different from the set of weights for the first performer (paragraph 32: "the matrix generator 20 mathematically combines these two vectors generated in response to the received data to generate values for an ideal supplier-rating matrix."), wherein the second performer's

overall performance rating is used to assess performance of the second performer with respect to performance of the first performer (paragraph 10: "the job attribute vector is a first job attribute vector, the performance vector is a first performance vector and the supplier rating matrix is a first supplier rating. In this embodiment, the method further includes receiving data associated with a specific service supplied to a customer of the supplier and generating a second performance vector in response to the received data. The method further includes generating a second job attribute vector in response to the specific service, the second job attribute vector indicating which range of job attribute values are associated with the specific service, defining a weighting factor and generating a second supplier rating matrix for the supplier by mathematically combining the first supplier rating matrix, the weighting factor, the second job attribute vector and the second performance vector.").

As per claims 15 and 29, Siegrist does not explicitly teach rules that model relative importance between categories. Benjamin teaches that it is known that the business logic rules are rules selected from the group consisting of rules that model relative importance between categories contained within the performance measures data, rules that model relative importance between bounded categories contained within the performance measures data, rules that model absolute importance of a category contained within the performance measures data, rules that model absolute importance of a bounded category contained within the performance measures data, and combinations thereof (See Table 3, page 7 where the various rules of speed, quality, cost and service have ratings from 2-5 that measure their relative importance).

As per claims 16 and 30, Siegrist does not explicitly teach the best combination of the weights. Benjamin teaches that it is known that each of the performers is evaluated by the mathematical optimization program in isolation by solving for the best possible combination of the weights that maximizes the overall performance rating of each performer (paragraph 32: "The matrix generator 20 also generates (step 250) a performance vector. The matrix generator 20 uses the received data to establish a value for each dimension in the performance vector, indicating the desired value and/or the importance of each to the user supplying the data. With the job attribute vector and the performance vector defined, the matrix generator 20 searches (step 255) the existing supplier rating matrices using the two vectors generated in response to the received data. As described in more detail in the examples below, the matrix generator 20 mathematically combines these two vectors generated in response to the received data to generate values for an ideal supplier-rating matrix. The selector module 30 searches the existing supplier-rating matrices and selects the supplier with an existing supplier-rating matrix that is closest to the ideal supplier-rating matrix. This selection is returned to the sender of the received data." Whereby the ideal rating would be one that is the best combination of weights.). Benjamin is an analogous art as it also teaches about rating performance. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the rating system of Siegrist with the best weight combination feature of Benjamin to provide an optimal means for assessing each provider.

As per claims 18 and 31, Siegrist teaches receiving performance measures data for a plurality of performers (column 1, lines 46-62: "the invention features a computer-based method of aiding comparison of competitive performance of a first provider of services with other providers of the services, where the services are provided to a mix of customers belonging to different classes and the performance in providing the services is different for customers belonging to different classes. Data representing the first provider's competitive performance in providing various services to its customers is stored. Also stored is mix data representing the mix of its customers to which the services are provided. Similar data is stored representing each of the other providers' competitive performance in providing various services to its customers. The data of the other providers is adjusted in accordance with the mix data of the first provider. The unadjusted data of the first provider is visually provided together with the adjusted data of the other providers); using the mathematical optimization program to optimize the overall performance rating for each of the performers (column 1, lines 47-48: "comparison of competitive performance of a first provider of services with other providers of the services). Siegrist does not explicitly teach forming tiers. Benjamin teaches that it is known to form tiers by grouping the performers based upon their respective overall performance ratings (See Table 1, page 4, where the measurements of turnaround and quantity have value tiers of 0-6 days, 1-4 weeks and 1+ months and 1-10, 11-100, 101-1000 and 1001+ respectively). Benjamin is an analogous art as it also teaches about rating performance. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the rating system of

Siegrist with the tiering feature of Benjamin to provide a more user friendly system that is efficiently organized according to commonalities such that the data is easier to assess.

As per claim 20, Siegrist teaches a constraint engine that constructs constraints based upon business logic rules, said business logic rules being related to at least one measurement contained within the performance measures data (column 2, lines 16-19: "Rules are stored for selecting which of the pertinent data has greater significance in comparing the performances of the service providers. The rules are automatically applied to the pertinent data to select the information for the printed report" where the rules would function as the constraints in the program); a mathematical optimization program connected to the constraint engine that includes an overall performance measures data (column 4, lines 25-40: "The final report 22 not only presents a mathematical and graphical comparison according to the user's parameters 18, but it also constructs an English-language prose explanation of the results of the comparison. A report may contain one or more of several sections. These sections include analyses of the client hospital's market share, payor mix, patient demographics, admit source, case mix, length of stay, and cost per case. The report also searches for comparison results of particular interest to the client hospital. Internal rules 28 cause the system 5 to determine, for example, if the client hospital has significantly (more than 110%) higher costs than its competitors, or which single competitor is most superior in a particular report area. In addition, the report includes an "Opportunity Analysis/Action Plan" section which provides suggestions to help the

client hospital improve its competitiveness"). Siegrist does not explicitly teach adjusting the weights. Benjamin teaches that it is known that the mathematical optimization program uses the performance measures data to optimize the overall performance rating of the performers by adjusting a set of weights constrained by the business logic constraints (paragraph 32: "The matrix generator 20 also generates (step 250) a performance vector. The matrix generator 20 uses the received data to establish a value for each dimension in the performance vector, indicating the desired value and/or the importance of each to the user supplying the data. With the job attribute vector and the performance vector defined, the matrix generator 20 searches (step 255) the existing supplier rating matrices using the two vectors generated in response to the received data. As described in more detail in the examples below, the matrix generator 20 mathematically combines these two vectors generated in response to the received data to generate values for an ideal supplier-rating matrix. The selector module 30 searches the existing supplier-rating matrices and selects the supplier with an existing supplier-rating matrix that is closest to the ideal supplier-rating matrix. This selection is returned to the sender of the received data." Whereby the ideal rating would be one that is the best combination of weights), wherein the overall performance rating is used to assess the performance of the performers (paragraph 32: "the matrix generator 20 mathematically combines these two vectors generated in response to the received data to generate values for an ideal supplier-rating matrix"). Benjamin is an analogous art as it also teaches about rating performance. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the rating system of

Siegrist with the best weight combination feature of Benjamin to provide an optimal means for assessing each provider.

As per claim 21, Siegrist teaches the objective function seeks optimality in the overall performance rating for the performers constrained by the business logic constraints (column 1, lines 58-62: "The data of the other providers is adjusted in accordance with the mix data of the first provider. The unadjusted data of the first provider is visually provided together with the adjusted data of the other providers.").

As per claim 23, Siegrist teaches the preselected set of performers includes suppliers that are to be assessed (column 2, lines 14-16: "From the raw data in the database, a set of pertinent data is generated appropriate to comparing the performances of the service providers." Whereby service provider is equivalent to supplier in that they perform an identical function in substantially the same manner with substantially the same results.).

As per claim 24, Siegrist teaches the preselected set of performers includes services that are to be assessed (column 2, lines 21-22: "The raw data may include data for services provided.").

As per claim 28, Siegrist teaches the business logic rules are converted into the constraints for use by the linear programming module in optimizing the overall performance ratings of the performers (column 2, lines 16-19: "Rules are stored for selecting which of the pertinent data has greater significance in comparing the performances of the service providers. The rules are automatically applied to the pertinent data to select the information for the printed report" where the rules would

function as the constraints in the program), wherein the overall performance ratings are used to assess the performances of the performers (column 1, lines 47-48: "comparison of competitive performance of a first provider of services with other providers of the services).

As per claims 19 and 32, Siegrist teaches providing the overall performance ratings of the performers to a statistical analysis program means (column 3, lines 25-31: "Referring to FIG. 1, healthcare facility (i.e., hospital) financial information is managed by a computer system 5 controlled by a program 10. This financial information is used by the system to analyze the comparative performance of competing hospitals and produce a report on the results. The report helps hospitals plan strategies for cutting costs and improving their competitive position."); and forming non-uniform tiers by grouping the performers based upon performance distribution analysis performed by the statistical analysis program means (See Figure 13f, sheet 21: where each regional supplier has their cost information grouped into the various departments).

6. Claims 6 and 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siegrist in view of Bye (US 2002/0178049).

As per claim 6, Siegrist does not explicitly teach normalizing the data. Bye teaches that it is known to normalize the performance measures data such that the performance measures data have substantially similar ranges (paragraph 51: "The raw scores for each supplier may then be normalized to produce an evaluation score. Of course, one or more of the monetary values in column 227 may also be normalized or

otherwise modified before being multiplied by the appropriate weight."). Bye is an analogous art as it also teaches about evaluating providers. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the evaluation system of Siegrist with the normalizing feature of Bye to provide an efficient means of comparing the data.

As per claims 11 and 25, Siegrist does not explicitly teach a product being assessed. Bye teaches that it is known that the preselected set of performers includes products that are to be assessed (paragraph 8: "Cross functional opportunities can be found using a supplier database and an interface screens, which will potentially capture information on what products are produced by each supplier."). Bye is an analogous art as it also teaches about evaluating providers. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the evaluation system of Siegrist with the product assessment feature of Bye to provide a comparable means of assessing products as well as suppliers.

7. Claims 12-13 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siegrist.

As per claims 12-13, Siegrist teaches the mathematical optimization program is a non-linear program module (See Figure 1, Program (10). Official notice is taken that it is old and well known that databases are run using both linear and non-linear programs.).

As per claims 26-27, Siegrist teaches the mathematical optimization program is a non-linear program module (See Figure 1, Program (10). Official notice is taken that it is old and well known that databases are run using both linear and non-linear programs).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art also teaches about performance assessment: Michlowitz et al (US 2002/0072953), Kansal (US 2003/0208420), and Lacy et al (US 6,735,570).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Krisciunas whose telephone number is 571-272-6931. The examiner can normally be reached on Monday through Friday, 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMK
February 16, 2006

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